

**PENDING CLAIMS:**

1-123 (Cancelled).

124. (Previously presented) A process for preparing an orthopaedic implant prosthesis bearing having improved mechanical properties and increased wear resistance comprising the steps of:

- a) providing an ultrahigh molecular weight polyethylene (UHMWPE) preform from which the bearings are to be fabricated;
- b) heating the preform to a temperature above the melting point of the UHMWPE to about 230°C; and
- c) subsequently irradiating the preform.

125. (Previously presented) The process of claim 124, wherein the heating step is performed at temperatures of about 145°C.

126. (Previously presented) The process of claim 124, wherein the preform is irradiated with gamma radiation at a dose greater than 1 Mrad.

127. (Previously presented) A process for preparing an orthopaedic implant prosthesis bearing having improved mechanical properties and increased wear resistance comprising the steps of:

- a) providing an ultrahigh molecular weight polyethylene (UHMWPE) preform from which the bearings are to be fabricated;
- b) irradiating the preform; and
- c) heating the preform to a temperature from above the melting point of the UHMWPE to about 300°C.

128. (Previously presented) The process of claim 127, wherein the heating step is performed at temperatures of about 145°C.

129. (Previously presented) The process of claim 127, wherein the preform is irradiated with gamma radiation at a dose of at least 1 Mrad.